

ABSTRACT

Asphalt concrete pavement comprising consisting of an asphalt surface course, concrete subbase of specified compressive strength f_c' and modulus of rupture up to 5 5,000 and 750 psi, respectively, with small grains crushed limestone finer than 9.5mm as a coarse aggregate, and a layer of granular material between the surface course and concrete subbase is considered as a semi-rigid pavement. Rigidity of this composite structure is provided by the concrete subbase whereas its flexibility is provided by the asphalt surface course resting on the layer of granular material. Limitation of 10 deformations of asphalt surface course within desirable level and corresponding reduction of fatigue stresses and cracking of this course is achieved by the choice of quality and thickness of granular material layer. Part of asphalt is replaced by the very cheap and efficient concrete. Initial cost of this pavement is close to that of flexural pavement whereas its maintenance should be close to that of rigid pavement.

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